How to diagnose hepatic encephalopathy in the emergency department.

Abstract:

Blood ammonia-measurements are often performed in the emergency departments to diagnose or rule out hepatic encephalopathy (HE). However, the utility and correct interpretation of ammonia levels is a matter of discussion. At this end the present prospective study evaluated whether blood ammonia levels coincide with HE which was also established by the West Haven criteria and the critical flicker frequency, respectively. In 59 patients with known cirrhosis ammonia-levels were determined and patient were additionally categorized by the West-Haven criteria and were also evaluated psychophysically using the critical flicker frequency, CFF for the presence of HE. When false positive and false negative results were collapsed the determination of blood ammonia levels alone resulted in 40.7% in a misdiagnoses of HE compared to the West-Haven criteria (24/59 when using West-Haven criteria, 95% confidence interval [CI], 28.1% to 54.3%) and 49.2% when compared with the results of the CFF (29/59, when using CFF, 95% CI, 35.9% to 62.5%). Ammonia blood levels do not reliably detect HE and the determination of blood ammonia can not be regarded a useful screening test for HE. Its use as sole indicator for a HE in the Emergency Department may frequently result in frequent misinterpretations.